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AQ – 2642

Third Year Fifth Semester M. C. A. Examination

ARTIFICIAL INTELLIGENCE

Paper – 5 MCA 1

P. Pages : 2

Time : Three Hours] [Max. Marks : 80

Note : (1) Due credit will be given to neatness and adequate dimensions.
(2) Assume suitable data wherever necessary.
(3) Illustrate your answer wherever necessary with the help of neat sketches.
(4) Use pen of Blue/Black ink/refill only for writing the answer book.

1. (a) Give syntax of 'Cond' function. Define a function to display a list of fibbnacy numbers up to 10. 8

(b) Give syntax of following LISP functions and explain with suitable examples :
(i) car (ii) append (iii) member 6

OR

2. (a) What is function ? What is predicates ? How to define a function in LISP ? Give one example. 6

(b) (i) Write syntax of <, >, < =, > = in LISP. Give an example of each. 4

(ii) Rewrite the following numeric expression in LISP :—
(i) 12 + 3 * 5 + (7/3)
(ii) a + b * c / (5a) 4

3. (a) What is the use of inference rule ? Explain with Transposition and chain rule. 6

(b) Explain syntax and symantics of propositional logic with suitable example. 8

OR

4. (a) Explain Non–deductive inference method with suitable example. 6

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(b) What is resolution principle ? Explain with

(i) Unit resulting resolution.

(ii) Linear input resolution. 8

5. (a) Explain circumscription with suitable example. 6

(b) What is temporal logic ? Explain. 7

OR

6. (a) What do you mean by Truth maintenance system ? Explain. 6

(b) What is Open and Close worlds ? Explain default reasoning and closed world assumption. 7

7. (a) Explain blind search with suitable example. 6

(b) Write and explain AO* search algorithm. 7

OR

8. (a) Explain Hill–Climbing method with example. 6

(b) Explain memory organization system. 7

9. (a) Draw and explain general learning model. 7

(b) Explain types of learning. 6

OR

10. (a) What is Analogical learning and explanation based learning ? Explain. 7

(b) Explain Inductive learning method with example. 6

11. (a) Explain Rule based system architecture. 7

(b) Explain inference process. 6

OR

12. (a) Explain decision–tree architecture. 6

(b) Explain blackboard system architecture. 7

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